

IN THE DISTRICT COURT OF OKLAHOMA COUNTY
STATE OF OKLAHOMA

MISTY RALEY, Individually, and) CJ-2005-4935
MISTY RALEY, as Parent and Next)
Friend of C [REDACTED] G [REDACTED] W [REDACTED])
G [REDACTED], AND C [REDACTED] G [REDACTED], minor)
Children,)

Plaintiffs,)

vs.)

HYUNDAI MOTOR COMPANY, a Korean)
Corporation; HYUNDAI MOTOR AMERICA,)
a California Corporation; NSK LTD,)
a Japanese Corporation;)

Defendants.)

Deposition of DR. DON FRIEDMAN taken on behalf of
Defendants at the Harbor View Inn, 28 West Cabrillo Boulevard,
Santa Barbara, California, at 10:10 a.m., Monday, October 2,
2006, before WENDY DRISCOLL, CSR No. 12480, a Certified
Shorthand Reporter within and for the County of Ventura, State
of California, pursuant to Notice.

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EXHIBIT

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1 then veered to the right and it had, what I think you've
 2 described in your report, as a sideswipe of the barrels,
 3 right?
 4 A Yes.
 5 Q And so after the sideswipe occurs, the vehicle goes
 6 into a counterclockwise yaw across the paved roadway, correct?
 7 A Yes.
 8 Q Is the counterclockwise yaw something that is caused
 9 by steering input from the driver?
 10 A It's not clear. I mean, according to Dickerson, I
 11 think he said that he thought the vehicle had, by the time it
 12 got to the bottom of the slope, it was something like a 70 or
 13 -- that was my impression, something like a 70-degree yaw
 14 relative to the direction of travel counterclockwise.
 15 Q Wouldn't that likely be the result of oversteering as
 16 a result of the sideswipe on the right?
 17 A Not when you're talking about it goes a distance of
 18 400 feet. In other words, the question of likely is not a --
 19 I don't think that's a good qualifier. Sort of, obviously,
 20 yes, it did yaw, but what the initiation of the yaw was is
 21 hard to say since the barrels were on the right, then the
 22 impact and most of the damage to the sideswipe is at the front
 23 of the vehicle. So just as the contact on the rear left
 24 bumper would have caused a right yaw into the barrels, the
 25 contact with the barrels would have initiated a left yaw.

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1 Q You've reproduced as figure one in your report the
 2 police officer's sketch. Do you think the point of rest
 3 depicted in the sketch is essentially correct?
 4 MR. MERRITT: The point of rest of what?
 5 MR. JENNINGS: Point of rest of the vehicle.
 6 Q Is that essentially correct?
 7 A I don't know.
 8 Q You don't have any reason to think that it's not, do
 9 you?
 10 A Well, I think he said one roll, he said a number of
 11 things, I think it was up to Mr. Dickerson to evaluate that.
 12 It only affected my opinion with regard to the things that
 13 Mr. Dickerson investigated and so it's not -- it wasn't
 14 something that I needed to determine personally.
 15 Q At what point would the air bag on the driver's side
 16 have deployed?
 17 A Probably on the first half roll.
 18 Q May I use your vehicle, here?
 19 A Sure.
 20 Q So why don't you demonstrate for me using your little
 21 car there at what point do you think or what would have been
 22 the position of the vehicle relative to the ground when the
 23 driver's side air bag deployed. Can you do that, please, sir.
 24 A Positioned relative to the ground. I didn't
 25 investigate the question of how the side impact air bag is

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1 deployed and so I don't know whether it had a contact sensor
 2 or an inertial sensor. I suspect it had a contact sensor. My
 3 suggestion then, if it has a contact sensor, would be that the
 4 vehicle contacts the earth as it finishes the first half roll,
 5 then deploys and then continues. If it had a rollover sensor
 6 or if there were sufficient racking of the vehicle from the
 7 near side to cause the far side sensor to activate, then it
 8 could have been earlier.
 9 Q There wasn't any defect in the vehicle that caused
 10 the roll itself, was there?
 11 A I didn't investigate whether there was a defect.
 12 Typically, when you have a nonsingle vehicle rollover, the
 13 cause of the rollover is clouded by too many factors to say.
 14 I mean, it's always the case that drivers have some influence
 15 on it, vehicle's suspension and characteristics have some
 16 influence on it and a roll propensity has some influence on
 17 it, but I don't think in a multi-vehicle or a nonsingle
 18 vehicle rollover there's anything descriptive that you can
 19 say.
 20 Q So by the time this vehicle rolled it apparently had
 21 been struck in the left rear by another vehicle and it had
 22 been struck on the right front by barrels, correct?
 23 A Right.
 24 Q Then it takes off cross-country off the pavement and
 25 is yawing down the incline before it actually rolls, right?

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1 A Yes. And so the furrowing with respect to the
 2 incline is such that you would believe that the vehicle was
 3 moving relatively slowly at the time that it rolled.
 4 Q The furrowing that you see where, in the dash cam
 5 video?
 6 A Yeah.
 7 Q That's your only information about the furrowing,
 8 isn't it?
 9 A I got the impression from Mr. Dickerson, independent
 10 of the video camera, that the trip point was at the bottom of
 11 the incline. And so I presume that was from some furrowing
 12 that was present.
 13 Q It's your opinion that Mrs. Raley was likely ejected
 14 through the side window, correct?
 15 A Or the sunroof.
 16 Q Have you made an effort to determine which it was?
 17 A No, because the injury occurred prior to that.
 18 Q So it doesn't matter what portal she came through?
 19 A Well, I think it matters. She didn't come through
 20 the right front window because that would be inconsistent with
 21 a trajectory that would put her where she was at rest.
 22 Q Of course. But from the standpoint of understanding
 23 her kinematics and the mechanisms of her injury, it doesn't
 24 really matter to you whether she came out through the side
 25 window or the sunroof, is that correct?